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SKYLAB - Water Depth Determination
Quarterly Progress Report
covering 1 June - 30 August 1973

EREP Investigation 446
NASA Contract NAS9-13278

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The following report serves as the second quarterly progress report for EREP Investigation 446 which is entitled "Water Depth Determination", under contract NAS9-13278.

S-190A and S-190B imagery has been received for the Puerto Rico test site. Ground truth has been collected in the form of Coast and Geodetic Survey charts (no. 901 and 902) of the West and South coasts of Puerto Rico. Follow up contact will also be made with Mr. Trumbull of the USGS who was on station in Puerto Rico during this period.

Improved processing techniques for extracting water depth information from multispectral scanner data have been developed and tested with ERTS data. Processing of SKYLAB data will begin when S-192 tapes are received and converted to ERIM format. Screening films of channels 2, 7, and 11 were received and used to designate 2 seconds of digital data over the test site.

Data tapes containing all channels of the S-192 scanner data for the Puerto Rico test site have been requested, but have not yet been recieved.

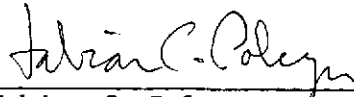
The S-190 imagery of the Puerto Rico test site shows a considerable amount of bottom detail along the southern coast of Puerto Rico west of Isla Caja de Muertos (about $66^{\circ}30'W$), and along part of the west coast. The west coast is partly obscured by clouds and by a surface anomaly visible even in channel 11.

We expect to generate depth maps of unobscured areas along the south and west coasts of Puerto Rico from the S-192 data during the next period. The S-190 imagery shows bottom features indicated on the Coast and Geodetic Survey charts to a depth of almost 10 meters. If the S-192 data is of similar quality, our depth charts should extend to about the same depth.

Some usable data has apparently been collected for the West and Southern coastline, and the outlook is optimistic for realizing the objectives outlined in the milestone plan.


As soon as a depth map has been generated for these test areas, check out and verification of features will be undertaken. This is especially true if uncharted shoals are measured from the S-192 data. A field trip to Puerto Rico for verification would be necessary.

Submitted by:



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